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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,903	01/28/2000	Jay McCormack	00034	2805

7590 03/14/2003

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EXAMINER
SANTIAGO, ENRIQUE L

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/493,903	Applicant(s) MCCORMACK ET AL.	
	Examiner Enrique L Santiago	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27-29* is/are allowed.

6)☒ Claim(s) *1-22,24-26,30 and 31* is/are rejected.

7)☒ Claim(s) *23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 10, 12-16, 19, 20, 21, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over M. Agarwal, J. Cagan Article "A blend of different tastes: the language of coffeemakers" in view of Balz et al. US patent no. 5,929,865.

-Regarding claim 1, 10 and 12, Agarwal et al. teaches parametric shape grammars (see pages 208-221).

Agarwal et al. does not directly teach a shape decomposition module for decomposing a first shape into at least one subshape belonging to one of a plurality of subshape groups, and a shape recognition module in communication with the shape decomposition module.

However in similar art Balz et al. teaches a shape decomposition module 14 (see fig 1, column 2, lines 59-62) for decomposing a first shape into at least one subshape belonging to one of a plurality of subshape groups (see fig. 2, column 2, line 59-column 3, line 8, column 3, lines 39-53), and a shape recognition module 20 in communication with the shape decomposition module (see fig 1, column 3, lines 40-53).

Therefore it would have been obvious to one skilled in the art at the time of the invention to use said apparatus, because it would provide a method for converting graphics data into raster lines that is significantly less complex and time consuming than conventional conversion

methods, and would be suitable for use with automated manufacturing equipment (see Balz et al. column 4, lines 39-45).

-Regarding claims 2 and 14, Balz et al. further teaches a shape decomposition module for decomposing a left-hand shape into at least one subshape belonging to one of a plurality of subshapes (see fig. 2, column 2, line 59-column 3, line 8, column 3, lines 39-53).

-Regarding claims 3, 15 and 21, Balz et al. further teaches a method wherein the subshape groups have a hierarchical order of decreasing constraints (see column 3, lines 39-63, column 4, lines 14-45).

-Regarding claim 4, Balz et al. further teaches a shape decomposition module for decomposing a two-dimensional left-hand shape into a subshape (see fig. 2, column 2, line 59-column 3, line 8, column 3, lines 39-53).

-Regarding claims 5 and 6, Baltz et al. does not directly teach a shape decomposition module for decomposing a three-dimensional left-hand shape and a one-dimensional left-hand shape of a shape into a subshape.

However it would have been obvious to one skilled in the art at the time of the invention include said functions as part of the shape decomposition module, because it would provide a method for converting graphics data into raster lines that is significantly less complex and time consuming than conventional conversion methods, and would be suitable for use with automated manufacturing equipment (see Balz et al. column 4, lines 39-45).

-Regarding claim 7, Baltz et al. further teaches a shape recognition module for searching a shape for a transformation of the subshape (see the abstract, column 3, lines 39-63, column 4, lines 14-45).

-Regarding claims 8 and 16, Baltz et al. further teaches a method wherein the shape recognition module is for recognizing a transformation of a first shape by searching the first shape for a transformation of the subshape (see fig. 2, column 2, line 59-column 3, line 8, column 3, lines 39-63, column 4, lines 14-45).

-Regarding claim 13, Baltz et al. teaches a shape decomposition module (see fig 1, column 2, lines 59-62); and a shape recognition module in communication with the shape decomposition module (see fig 1, column 3, lines 40-53).

-Regarding claim 19, Baltz et al. further teaches an intelligent rule selection module in communication with the parametric shape interpreter (see fig 1, column 3, lines 40-53).

-Claim 20 and 25 combine the limitations of claims 8 and 10 and is rejected for the same reasons.

-Claim 24 combines the limitations of claims 2 and 12 and is rejected for the same reasons.

Claims 9, 11, 17, 18, 22, 26, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over M. Agarwal, J. Cagan Article "A blend of different tastes: the language of coffeemakers" in view of Balz et al. US patent no. 5,929,865 and further in view of Trew et al. US patent no. 5,280,530.

-Regarding claims 9, 17, 22, 26 and 31, Agarwal et al. and Baltz et al. do not directly teach a method wherein the shape recognition module is for recognizing a transformation of the shape in a first shape by progressively searching for a transformation of a subshape belonging to each of the subshape groups that is not null and subtracting the parametric transformation from the first shape.

However in similar art Trew et al. teaches said method (see the abstract, column 2, lines 20-42).

Therefore it would have been obvious to one skilled in the art at the time of the invention to use said method, because it would improve the process of converting design data into pixel data that can be used with automated manufacturing machinery to improve the production yield (see column 1, lines 5-44).

-Regarding claim 11, Agarwal et al. and Baltz et al. do not directly teach a method wherein the shape recognition module is for searching a second shape for a transformation of the subshape.

However in similar art Trew et al. teaches said method (see the abstract, column 2, lines 20-42, column 3, line 64, column 15, lines 3-5).

Therefore it would have been obvious to one skilled in the art at the time of the invention to use said method, because it would improve the process of converting design data into pixel data that can be used with automated manufacturing machinery to improve the production yield (see Baltz et al. column 1, lines 5-44).

-Regarding claim 18, Agarwal et al. and Baltz et al. do not directly teach subtracting the parametric transformation from the first shape, and substituting therefor a transformation of the shape.

However in similar art Trew et al. teaches subtracting the parametric transformation from the first shape (see the abstract, column 2, lines 20-42) and substituting therefor a transformation of the shape (see the abstract, column 2, lines 20-42, column 7, line 56-column 8, line 12).

Therefore it would have been obvious to one skilled in the art at the time of the invention to use said method, because it would improve the process of converting design data into pixel data that can be used with automated manufacturing machinery to improve the production yield (see Baltz et al. column 1, lines 5-44).

-Claim 30 combines the limitations of claims 10 and 11 and is rejected for the same reasons.

Allowable Subject Matter

Claim 23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 27-29 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US patent no. 5,929,865: US patent no. 5,280,530: US patent no. 5,133,052: US patent no. 5,325,475: US patent no. 5,590,261: US patent no. 5,801,711: US patent no. 5,870,106: US patent no. 5,999,944: US patent no. 5,636,297: US patent no. 6,118,897: US patent no. 6,191,787 B1: US patent no. 6,219,056 B1: US patent no. 6,292,197 B1: US patent no. 6,356,272 B1: US patent no. 6,512,519 B1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enrique L. Santiago whose telephone number is (703) 306-5908. The examiner can normally be reachcd on Monday to Friday from 7:00 A.M. to 3:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Enrique L. Santiago

March 9, 2003

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600